WE CLAIM:

1. An isolated genomic DNA sequence, differentially expressed in seed coat tissues.

2. The genomic DNA sequence of claim 1 differentially expressed within the outer integument of the seed coat.

3. The genomic DNA sequence of claim 1 differentially expressed within the inner integument of the seed coat.

4. The genomic DNA sequence of claim 1 differentially expressed within the thick walled parenchyma of the seed coat.

5. The genomic DNA sequence of claim 1 differentially expressed within the thin walled parenchyma of the seed coat.

6. The genomic DNA sequence of claim 1 differentially expressed within the endothelium of the seed coat.

7. The genomic DNA sequence of claim 1 differentially expressed within the hourglass cells of the seed coat.

8. The genomic DNA sequence of claim 1 differentially expressed within the palisade of the seed coat.

9. The genomic DNA sequence of claim 1 differentially expressed within the stellate parenchyma of the seed coat.

10. The genomic DNA sequence of claim 1 differentially expressed within the membranous endocarp associated with the seed coat.

11. A seed-coat promoter obtained from the genomic DNA sequence of claim 1.

12. The seed-coat promoter of claim 11 that controls the differential expression of a gene associated therewith, within the outer integument of the seed coat.

13. The seed-coat promoter of claim 11 that controls the differential expression of a gene associated therewith, within the inner integument of the seed coat.

14. The seed-coat promoter of claim 11 that controls the differential expression of a gene associated therewith, within the thick walled parenchyma of the seed coat.

15. The seed-coat promoter of claim 11 that provides for differential expression of a gene associated therewith, within the thin walled parenchyma of the seed coat

16. The seed-coat promoter of claim 11 that controls the differential expression of a gene associated therewith, within the endothelium of the seed coat.

17. The seed-coat promoter of claim 11 that controls the differential expression of a gene associated therewith, within the hourglass cells of the seed coat.

18. The seed-coat promoter of claim 11 that controls the differential expression of a gene associated therewith, within the palisade of the seed coat.

19. The seed-coat promoter of claim 11 that controls the differential expression of a gene associated therewith, within the stellate parenchyma the seed coat.

20. The seed-coat promoter of claim 11 that controls the differential expression of a gene associated therewith, within the membranous endocarp associated with the seed coat.

21. The isolated genomic DNA of claim 1 characterized by the restriction map selected from the group consisting of Figure 11 (a), (b), (c) and (d).

22. An isolated promoter differentially expressed in seed-coat tissues.

23. The promoter of claim 22 obtained from angiosperms.

24. The promoter of claim 23 obtained from the group consisting of tobacco or soybean.

25. A cloning vector comprising a heterologous gene encoding a protein, and the promoter of claim 22, wherein the heterologous gene is under the control of the promoter.

26. A plant cell which has been transformed with a vector as claimed in claim 25.

27. A transgenic plant cell containing a promoter as claimed in claim 22, operatively linked to a heterologous gene encoding a protein.

28. A seed containing a promoter as claimed in claim 22, operatively linked to a heterologous gene encoding a protein.

29. An isolated genomic DNA sequence, preferentially expressed in seed coat tissues.

30. A seed-coat promoter obtained from the genomic DNA sequence of claim 29.

31. The seed-coat promoter of claim 11 comprising at least 10 contiguous nucleotides of nucleotides 1-2526 of SEQ ID NO:7.

32. The seed coat promoter of claim 31 comprising nucleotides 1-2526 of SEQ ID NO:7, or an analogue thereof, wherein said analogue hybridizes to a nucleic acid defined by nucleotides 1-2526 of SEQ ID NO:7 under stringent hybridization conditions and maintains seed-coat, or seed-coat associated promoter activity.

33. The seed-coat promoter of claim 11 comprising at least 10 contiguous nucleotides of nucleotides 1-2450 of SEQ ID NO:8.

34. The seed coat promoter of claim 33 comprising nucleotides 1-2450 of SEQ ID NO:8, or an analogue thereof, wherein said analogue hybridizes to a nucleic acid defined by nucleotides 1-2450 of SEQ ID NO:8 under stringent hybridization conditions and maintains seed-coat, or seed-coat associated promoter activity.

35. The seed-coat promoter of claim 11 comprising at least 10 contiguous nucleotides of nucleotides 1-5514 of SEQ ID NO:9.

36. The seed coat promoter of claim 35 comprising nucleotides 1-5514 of SEQ ID NO:9 or an analogue there, wherein said analogue hybridizes to a nucleic acid defined by nucleotides 1-5514 of SEQ ID NO:9 under stringent hybridization conditions and maintains seed-coat, or seed-coat associated promoter activity.

37. A cloning vector comprising a heterologous gene encoding a protein, and the promoter of any one of claims 32, 34 or 36 wherein the heterologous gene is under the control of the promoter.

38. A plant cell which has been transformed with a vector as claimed in claim 37.

39. A transgenic plant cell containing a promoter as claimed in claim 38, operatively linked to a heterologous gene encoding a protein.

40. A seed containing a promoter as claimed in any one of claims 32, 34 or 36, operatively linked to a heterologous gene encoding a protein.

Sub A3

Sub A4

Add A5